

Safety relays - PSR-SPP- 24UC/THC4/2X1/1X2 - 2963983

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Safety relay for two-hand control devices in accordance with ISO 13851 type IIIC to SIL 3 or Cat. 4, PL e in accordance with EN ISO 13849, synchronous activation monitoring < 0.5 s, 2 N/O contacts, 1 N/C contact, safe isolation, width: 22.5 mm, pluggable Push-in terminal block


The figure shows a version with a screw connection

Your advantages

- ✓ For two-hand control devices according to ISO 13851 Type IIIC
- ✓ Up to Cat. 4/PL e in accordance with ISO 13849-1, SIL 3 in accordance with IEC 62061, SIL 3 in accordance with IEC 61508
- ✓ 2 channel control
- ✓ Synchronous activation monitoring < 0.5 s
- ✓ Automatic activation
- ✓ Two enabling and one signaling current path



Key Commercial Data

Packing unit	1 pc
GTIN	 4 017918 904807
GTIN	4017918904807

Technical data

Dimensions

Width	22.5 mm
Height	112 mm
Depth	114.5 mm

Ambient conditions

Ambient temperature (operation)	-20 °C ... 55 °C
Ambient temperature (storage/transport)	-40 °C ... 70 °C
Max. permissible relative humidity (operation)	75 % (on average, 85% infrequently, non-condensing)
Max. permissible humidity (storage/transport)	75 % (on average, 85% infrequently, non-condensing)

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Technical data

Ambient conditions

Maximum altitude	max. 2000 m (Above sea level)
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Input data

Nominal input voltage U_N	24 V AC/DC
Input voltage range	20.4 V AC/DC ... 26.4 V AC/DC
Input voltage range in reference to U_N	0.85 ... 1.1
Typical input current at U_N	125 mA AC
	60 mA DC
Voltage at input/start and feedback circuit	approx. 24 V DC
Typical response time	50 ms
Typical release time	20 ms
Concurrence	< 0.5 s
Recovery time	1 s
Operating voltage display	Green LED
Status display	Green LED
Protective circuit	Fuse PTC resistor
	Surge protection Suppressor diode

Output data

Contact type	2 enabling current paths
	1 signaling current path
Contact material	AgSnO ₂ , + 0.2 μm Au
Maximum switching voltage	250 V AC/DC
Minimum switching voltage	15 V AC/DC
Limiting continuous current	6 A (N/O contact)
	5 A (N/C contact)
Maximum inrush current	6 A
Inrush current, minimum	25 mA
Interrupting rating (ohmic load) max.	144 W (24 V DC, τ = 0 ms)
	288 W (48 V DC, τ = 0 ms)
	110 W (110 V DC, τ = 0 ms)
	88 W (220 V DC, τ = 0 ms)
	1500 VA (250 V AC, τ = 0 ms)
Maximum interrupting rating (inductive load)	42 W (24 V DC, τ = 40 ms)
	42 W (48 V DC, τ = 40 ms)
	42 W (110 V DC, τ = 40 ms)
	42 W (220 V DC, τ = 40 ms)
Switching capacity min.	0.4 W
Mechanical service life	approx. 10 ⁷ cycles
Switching capacity (360/h cycles)	4 A (24 V DC)
	4 A (230 V AC)

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Technical data

Output data

Output fuse	10 A gL/gG NEOZED (N/O contact)
	6 A gL/gG NEOZED (N/C contact)

General

Relay type	Electromechanical relay with force-guided contacts in accordance with IEC/EN 61810-3
Nominal operating mode	100% operating factor
Net weight	192.9 g
Mounting position	any
Mounting type	DIN rail mounting
Degree of protection	IP20
Min. degree of protection of inst. location	IP54
Housing material	Polyamide
Housing color	yellow

Connection data

Connection method	Push-in connection
pluggable	yes
Conductor cross section solid	0.2 mm ² ... 1.5 mm ²
Conductor cross section flexible	0.2 mm ² ... 1.5 mm ²
Conductor cross-section AWG	24 ... 16
Conductor cross-section flexible with ferrule without plastic sleeve	0.25 mm ² ... 1.5 mm ² (only together with CRIMPFOX 6)
Conductor cross-section flexible with ferrule and plastic sleeve	0.25 mm ² ... 1.5 mm ² (only together with CRIMPFOX 6)
Stripping length	8 mm

Safety-related characteristic data

Stop category in accordance with IEC 60204	0
Type class	IIIC
Designation	IEC 61508 - High demand
Safety Integrity Level (SIL)	3
Designation	IEC 61508 - Low demand
Safety Integrity Level (SIL)	3
Designation	EN ISO 13849
Performance level (PL)	e
Category	4
Designation	EN 62061
Safety Integrity Level (SIL)	3

Standards and Regulations

Designation	Air clearances and creepage distances between the power circuits
Standards/regulations	DIN EN 50178/VDE 0160
Rated insulation voltage	250 V
Rated surge voltage/insulation	6 kV / Safe isolation, increased insulation

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Technical data

Standards and Regulations

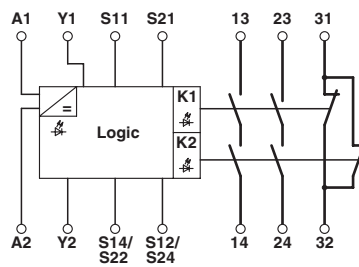
Degree of pollution	2
Overvoltage category	III
Shock	15g
Vibration (operation)	10 Hz ... 150 Hz, 2g

Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads"

Drawings

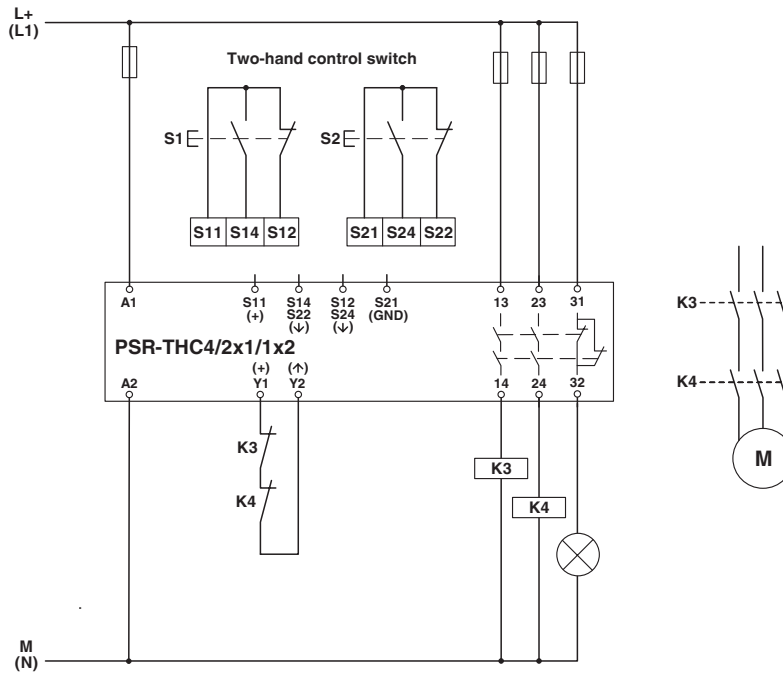
Circuit diagram



Block diagram

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Circuit diagram



Two-hand control device

Classifications

eCl@ss

eCl@ss 10.0.1	27371821
eCl@ss 11.0	27371821
eCl@ss 4.0	40020600
eCl@ss 4.1	40020600
eCl@ss 5.0	27371900
eCl@ss 5.1	27371900
eCl@ss 6.0	27371800
eCl@ss 7.0	27371821
eCl@ss 9.0	27371821

ETIM

ETIM 2.0	EC000196
ETIM 3.0	EC001449
ETIM 4.0	EC001449
ETIM 6.0	EC001452
ETIM 7.0	EC001452

UNSPSC

UNSPSC 6.01	30211901
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Classifications

UNSPSC

UNSPSC 7.0901	39121501
UNSPSC 11	39121501
UNSPSC 12.01	39121501
UNSPSC 13.2	39121105
UNSPSC 18.0	39121105
UNSPSC 19.0	39121105
UNSPSC 20.0	39121105
UNSPSC 21.0	39121100

Approvals

Approvals

Approvals

Functional Safety / UL Listed / cUL Listed / Functional Safety / EAC / cULus Listed

Ex Approvals

Approval details

Functional Safety			968/EZ 346.03/21
UL Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 140324
cUL Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 140324
Functional Safety			01/205/0542.03/21
EAC			TR_TS_D_00573_c

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Approvals

cULus Listed



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